SCIENCE & ENGINEERING ALLIANCE
A UNIQUE RESOURCE FOR THE NATION®

TransactionOnLine

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DECEMBER 2003

In The Spotlight:
Bernessa Rawls and Cecelia Young
SEA Summer Interns in Student Diversity Partnership Program sponsored by DOE

During the summer of 2003, students Bernessa Rawls, Paine College in Augusta, Georgia, and Cecelia Young, Virginia Union University in Richmond, VA, participated as interns at the SEA Washington, DC office in the Student Diversity Partnership Program (SDPP) sponsored by the U.S. Department of Energy (DOE). The assignment took place from June 10, 2003 to August 15, 2003, and focused on projects geared toward developing transferable skills related to scientific process development, documentation preparation, research analysis and teamwork.

The result of the internship was a research paper entitled "*The State Of Federal Research and Development Funding to the Nation's Historically Black Colleges and Universities (HBCUs).*" In addition to addressing this issue, the report also contained an evaluation of the National Science Foundations' (NSF) Division of Science and Resources Statistics (SRS) data regarding Science and Engineering (S&E) indicators for 2002. The focus of the paper was to determine how the overall data was relevant to the mission and goals of the SEA. Some of the findings included the following information:

- 82 HBCUs received Federal S&E obligations in the 1997 fiscal year totaling $327 million of which 57% was provided specifically for R&D.
- Funds for repair and renovation of research facilities at HBCUs totaled $10 million (1991-1993) and $22 million (1994-1995).
- In 2002, the SEA institutions collectively received approximately $45 million in Federal R&D funding.
- Preliminary data indicates that national research and development (R&D) expenditures continued to rise in 2002 although at a slower rate than experienced in recent years.
- Of the top 100 universities and colleges receiving the largest amount of Federal funds for S&E, there were no HBCUs that made the list.
- 46% of the institutions providing undergraduate degrees to black S&E doctorates were HBCUs in 1991-1995.
- 28% of black Ph.D. recipients received their undergraduate degrees from HBCUs in 1991-1995.
- Of the top 50 institutions producing African American graduates with baccalaureate degrees in S&E in 2001, HBCUs accounted for 50% of these graduates.

Upon completion of the internship, Ms. Rawls, a biology pre-med major, returned to Paine College to complete her senior year Ms. Young her junior year at Virginia Union. Ms. Rawls successfully completed her fall semester with straight A's while Ms. Young finished with a 3.6 GPA.

In discussing their accomplishments this past semester, they both noted that their position as interns at SEA helped them "learn how to conduct policy research and effectively communicate with others. Thanks to SEA for the opportunity to grow and further develop."


Ms. Bernessa

From The Executive Director

One of the best ways to help educational institutions serve a large population of youth in need and young people around the world is through effective partnerships. The Science and Engineering Alliance (SEA) helps to ensure an adequate supply of globally competitive scientists and engineers, while simultaneously meeting the research and development needs of the public and private sector. Investing in quality partnerships for the historically black colleges and universities (HBCUs) it serves is the cornerstone of the SEA program.

The next several issues of ***TransactionOnLine*** will focus on the strategic partnerships SEA is involved in. This issue highlights the partnership in action between SEA and the U.S. Department of Energy (DOE). Future issues will introduce readers to other valuable SEA partnerships involving Lawrence Livermore National Laboratory, National Institute of Standards and Technology (NIST) and the Washington, D.C. based law firm of Winston & Strawn.

In addition to partnerships, the SEA program enjoys strong support from charitable donations given through individuals who are committed to helping the nation's young people right now. Please visit the web site or contact the office directly to find out how you can partner with the SEA.

Happy New Year
R. L. Shepard
Executive Director

Editorial: The New TransActionOnline

TransactionOnLine

WHAT'S THE KEY TO EDUCATIONAL SUCCESS?

Each year, this question is pondered by millions of students preparing for the next phase of their academic education. There are many contributors to the successful completion of an academic program. While there is no single, simple answer, the possibilities and definitions for success are as boundless and personalized as individuals are. There is no question that setting goals, time management, hard work and participating in a strong networking alliance are fundamental building blocks to educational success. With the mission in mind of providing the member institutions with strong building blocks, the Science and Engineering Alliance (SEA) has served as an invaluable resource to both its partners and their students for the past 14 years by bridging the needs of the research and development scientific community to high-quality students and researchers from the SEA institutions. The result continues to be achievement of personal and professional satisfaction, formation of outstanding partnerships with prominent institutions and positive progression of underrepresented talent in the scientific community.

The new ***TransActionOnline*** newsletter will serve as a link for the future, supporting the needs of the SEA audience by going above and beyond the norm to provide relevant, timely and necessary information to promote the membership. Look forward to hearing the latest in research projects, presentation opportunities and learning principles that will enable the SEA audience to not only grow in their respective industries, but understand how their involvement can change the world. Additionally, information will be communicated regarding tools and techniques, on-going ventures, new partnerships and market trends that will aid the reader in making decisions that will shape their lives and the lives of others. Finally, the newsletter will serve as a mechanism for SEA partners to promote themselves and their projects, seek out specialized talent and directly encourage the emergence of interest in scientifically critical areas. In essence, ***TransActionOnline*** will be the "must have" resource for the intelligent scientist, the future-focused industry and the educational institution that stands by success.

Welcome to ***TransActionOnline***!

Happy Holidays!
Eva M. Owens
Editor

PARTNERSHIPS IN ACTION

U.S. Department Of Energy

As one of the strategic partners of the SEA, the U.S. Department of Energy (DOE) recently sponsored the "***First Annual Science and Engineering Alliance High School Day***" at the DOE Headquarters in Washington, D.C. Over 300 students and teachers participated in this special event that was part of the 13th Annual SEA Student Technical Conference. The presence of the DOE at this year's conference reinforced the organizations' commitment and desire to seek out exemplary underrepresented students and introduce them to the importance of continuing their research ambitions.

"In fact, we might well be called the Department of Energy and Science, given the importance of our role in American and indeed international science. And, the reason we are so deeply involved in science is simple -- our mission here at the Department of Energy … as I have stressed since becoming Secretary … is national security. And, in my view, a serious commitment to national security demands a serious commitment to science, especially basic research."

Spencer Abraham
Secretary of Energy
January 30, 2003

The Department of Energy's overarching mission is to advance the national, economic and energy security of the United States; to promote scientific and technological innovation in support of that mission; and to ensure the environmental cleanup of the national nuclear weapons complex.

Established on October 1st, 1977, the DOE has four strategic goals toward achieving its mission: Defense, Energy, Science and Environment. After 25 years in existence, the DOE now operates 24 preeminent research laboratories and facilities, four power marketing administrations, and manages the environmental cleanup from 50 years of nuclear defense activities that impacted two million acres in communities across the country. In "***Protecting National, Energy, and Economic Security with Advanced Science and Technology and Ensuring Environmental Cleanup***," as stated in the DOE's 2003 Strategic Plan, opportunities available with the DOE are endless and diverse.

Some of the current cutting-edge technologies and projects of interest supported by the DOE involve nuclear weapons and naval reactors research, the creation of world class scientific research capacity, investigation into nuclear waste removal and addressing national security challenges. **An additional point of interest is the collaboration between the U.S. and international world powers which suggest that possessing multi-linguistic and cultural skills will also be of key interest to the DOE and other governmental agencies as they prepare to tackle upcoming obstacles in science and technology**.

Programs supported by the DOE that are instrumental in the successful completion of the strategic plan for the next 25 years depend on the availability of high caliber scientists and engineers.

Students from underrepresented groups interested in becoming seriously involved in the development of these new industries should pay special attention to the following programs:

FreedomCar Government-industry program for the advancement of high-efficiency vehicles.

FutureGen Initiative to build the world's first integrated sequestration and hydrogen production research power plant.

Fossil Fuel National Energy Technology Lab request for proposals regarding "***Support of Advanced Fossil Resource Conversion and Utilization Research by Historically Black Colleges and Universities and Other Minority Institutions***."
PROPOSALS DUE JANUARY 6th, 2003

Coal Energy National Energy Technology Lab request for proposals regarding cost-shared applications for research and development of technologies enabling development of energy resources.
PROPOSALS DUE FEBRUARY 24th, 2004

Vision 21 Office of Science and Technology program regarding new approaches to producing energy that addresses pollution control.

The Department of Energy has won more R&D awards than any private sector organization, and twice as many as all other Federal agencies combined. DOE has an annual budget of about $23 billion and employs about 14,500 Federal and 100,000 contractor employees. For more information on the Department of Energy, please visit their website: http://www.doe.gov .

The SEA is very proud to have formed a partnership with the DOE and looks forward to expanding that relationship in the future.

FEATURED ARTICLE: THE VALUE OF NETWORKING

When most people think of networking, they imagine walking into a room of total strangers during an event, introducing themselves, handing out business cards and moving on to the next person as quickly as possible. This may provide the opportunity to meet new people, but following this method of networking will likely prove disappointing over time. When it is realized that relationships and connections originally hoped for have not been developed, it becomes clear that networking encompasses much more. Usually, this reality is sharpened when individuals seriously attempt to put their networking web to work for them in such tasks as seeking a new job, relocating to an unknown area, attempting to become more visible to obtain a promotion, running for a position on any level, starting a new business or soliciting support for a cause. Unfortunately, public perception is that networking requires individuals to look external to their current circle of influence, but in most cases knowing how to work their existing network will prove most beneficial. Given that assumption, two of the essential elements of performing networking are: (1) to understand what it means and (2) recognize the value of executing a focused networking plan.

Webster's Dictionary defines networking as "an informal system whereby persons having common interests assist each other." Based on this definition, there are three steps for establishing a mutually beneficial exchange occurrence. The first step in exploring networking opportunities and implementing a strong networking program is for individuals to take a closer look at the persons with whom they share common interests. Investing time in talking with associates, peers, co-workers, family, alumni and friends about their skills, goals and ambitions, lays a foundation for future relationship development. As the definition points out, this information can be shared informally and will enable a community of supporters to promote the individual with knowledge and enthusiasm because they are well-versed on their objectives and abilities.

Secondly, an individual must assure that their interests and hobbies are a direct reflection of the goals they have set for themselves. This may mean the individual will have to shift a number of things such as the type of volunteer work performed, adjustments in educational focus and personal development training to make possible the chance to interact with persons empowered to make introductions and further expand their personal contact rolodex. Networking is not one-sided. Individuals in need must be willing and able to equally endorse and support the endeavors and interests of the members of their networking circle. By being equipped with their own resources, contacts and connections in various areas of interests, the individual will be seen as a valuable asset with whom others will want to have an alliance.

Now that effective networking has been defined and how it should be implemented presented, the value of performing networking effectively can be appreciated. The U.S. economic downward spiral over the last two years, resulting in the loss of millions of jobs, has provided several perfect examples of good and bad networking. For some, economic change presented a welcomed opportunity to pursue their dream of becoming an entrepreneur and break away from the same things they had done for years. For others, it was an unexpected, unimaginable decline into the world of unemployment and hard times. What do these people have in common? The need to work their networks!

After 30 years of being a manager for a huge corporation, Person A decided to retire and start his own business. He created a wonderful email regarding his product, sent it out to all of his friends and sat back to wait for orders to roll in. Two years later, he was still waiting. Why? Everyone in his networking circle was happy to purchase his product, but he had never shared with anyone his dreams beyond his previous job. So, nobody could enthusiastically get behind his new plan. In addition, he had not established his business in a manner that allowed for easy access and promotion by, for example, setting up a dynamic website. In contrast, after 7 years of moving up the corporate ladder, Person B had been actively involved in several corporate organizations, teams and programs that provided opportunities for development and growth beyond that of her position at work. This served her well when corporate downsizing negatively impacted her. After taking some time off, she decided to pursue a different career path. During her time off, she attended conferences, volunteered at various events and continued to stay in touch with members of her networking support system, letting them know of her new career path and reminding them of all of the related experience she had to support the change. Within three months, she was newly employed in the job of her dreams.

MORAL OF THE STORY:
Never underestimate the value of good networking!

FOR STUDENTS ONLY

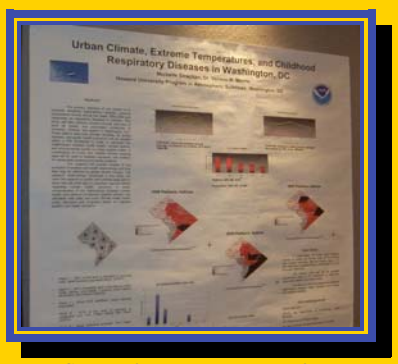
2002 and 2003 SEA Students, Exhibitors and Speakers Networking

2003 Conference Highlights

SEA 2003 Booth

Dr. Shepard and Dr. Williams
SEA MESA/HCPSS
Executive Director Coordinator

SEA 2003 NIST Booth



Student's Poster Presentation

Washington, DC – The 13th Annual Science and Engineering Alliance (SEA) Student Technical Conference was held at the Wyndham Hotel in Washington, DC on October 8th – 11th. High school students, undergraduates, doctoral candidates and professionals from around the nation presented oral and poster research projects covering the entire science and technology spectrum.

The conference, which was a huge success, included the first annual SEA High School Day at DOE, 2nd Annual SEA Student Alumni Symposium, exhibitors, awards luncheon, recognition dinner and a technology feedback session. Exhibitors provided students and faculty members with valuable information, tools and resources to take back to their respective institutions including the 2003 African American Yearbook distributed at the DOE.

SEA 2003 SBA Booth

This year also saw a number of additions that enhanced the overall professionalism of the conference. Pam Confer of Confer Consulting and Communications in Jackson, MS, served as the first ever official public relations services coordinator. Pam could be seen throughout the conference talking with various students, SEA members and organizational sponsors obtaining feedback that will be utilized in continuing to raise the level of excellence for the SEA. Additionally, we heard presentations from non-SEA membership school Mississippi State University's representative Ms. Dahlia Ashford who was attending the conference for the first time, and Robin N. Shepard, Ph.D. Candidate, Wake Forest University School of Medicine. Finally, the conference was pleased to have Mr. Eddie Parker, a 7th grader at Powell Middle School in Jackson, MS, as one of the presenters. Although initially a little nervous, Eddie provided a very informative, well-researched technical presentation proving that it is never too early to introduce young people to science and technology!

Dr. Gloria Thomas at Alumni Symposium

Representatives from the four SEA institutions gave great presentations and soaked up new knowledge from their peers and other SEA affiliates. While at DOE, they were addressed by Deputy Secretary the Honorable Kyle E. McSlarrow in a keynote address welcoming the students to the DOE. The panel discussion on proposal writing was attended by panelists including representatives from the National Science Foundation (NSF), Lawrence Livermore National Laboratories (LLNL) and the National Institute of Science and Technology (NIST) and of course, the DOE. Mr. Tommy Smith, Jr., P.E., Deputy Associate Director, Office of Strategic Initiative and Diversity, LLNL in Livermore, California provided a motivational speech that left the students better informed on the five steps to success: The Desire to Excel! The Belief That You Can Do It! The Willingness To Work! Actively Working! Closing The Loop!

In Memoriam: Mr. Willie A. Tempton

Members of the Science and Engineering Alliance (SEA) family were saddened by the passing of Mr. Willie Albert Tempton (64) on Friday, November 7th in Houston, TX after a brief illness.

A graduate of Prairie View A&M University (PVAMU), Mr. Tempton had many accomplishments. He achieved the rank of U.S. Army Colonel, served two tours of duty in Vietnam, and one tour in Korea as a combat pilot and was awarded two Bronze Star Medals, Air Medal, Meritorious Service Medal, Army Commendation Medal, Senior Aviator Wings, The Republic of Vietnam Action Medal, the Republic of Vietnam Service Medal, a Medal of Valor, and a Legion of Merit Medal. Following his retirement from the U.S. Army in 1996, Tempton returned to PVAMU and became senior vice president for external affairs and development. The Texas A&M University System Board of Regents appointed him acting president on May 20th, 2002, interim president on June 6th , 2002 and he served that role until August 15th, 2003.

In his role as vice president for external affairs and development, and interim president, Mr. Tempton was actively involved in the campus management of SEA from 1996 until his death. Those who worked closely with Mr. Tempton will remember his engaging smile, generous spirit, sense of humor, dedication to God, his country, his family and to Prairie View A & M University.

Willie Albert Tempton leaves to cherish his memory Mary, his wife of 45 years; Willie A. Tempton, Jr. of Baton Rouge, Louisiana; E. Michelle Tempton of Ft. Worth, Texas; Gerald D. Tempton of The Woodlands, Texas and Sharon M. Tempton Lacour of Houston, Texas. He further leaves seven grandchildren, one great granddaughter, special cousin and sister-in-law, Don and Florence Edwards of Waxahachie, Texas; and a host of other special nieces, nephews, cousins, and dear friends. His parents, Prince Albert Tempton and Margaret Tunson Tempton, preceded him in death.

Pinging Past Participants

Have you recently had a class reunion or alumni meeting and reminisced about old times with someone who attended the SEA conference with you? If so, we would like to hear from you and them. To update your contact information or provide contact information for past SEA recipients and participants, please send an email to evamowens_sea@msn.com with the subject line of "Past Participants." You will be kept informed of all events and receive public relations material regarding SEA. Thank you.

Organizational Websites of Interest:

Lawrence Livermore National Laboratory
http://www.llnl.gov

Department of Energy
http://www.doe.gov

American Association of Blacks in Energy
http://www.aabe-dcmet.org/

Blacks in Government
http://www.bignet.org/

The Black Scholar
http://www.theblackscholar.org/

The Environmental Protection Agency
http://www.epa.gov

Upcoming Research Deadlines :
Environmental Protection Agency(EPA) Scholarships & Fellowships

January 26th, 2004
National Network for Environmental Management Studies (NNEMS)
http://www.epa.gov/enviroed/NNEMS/2004index.html

February 1st, 2004
Research Associateship Programs (RAP)
http://www4.nationalacademies.org/pga/rap.nsf

February 2nd, 2004
NOAA Coastal Management Fellowship
http://www.csc.noaa.gov/cms/fellows.html

April 16th, 2004 (Proposal Solicitation) Innovation Pilots
Office of Solid Waste and Emergency Response (OSWER)
http://www.epa.gov/oswer/iwg/announcement.htm

Events Calendar

ORGANIZATION	DATES LOCATION
Dynamic Days 23rd Annual Intl	January 2nd – 5th Chapel Hill, NC
SEDRIS Technology 6th Annual	January 6th – 9th Lake Buena Vista, FL
Hawaii Intl Conf on Sciences	January 15th -18th Honolulu, HI
STTR/SBIR & HBCU/MI Technical Assistance (AAMU)	January 26th – 28th Normal, AL

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